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EXAMINER

KOVALICK, VINCENT E

| ART UNIT | PAPER NUMBER |
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2673

10

DATE MAILED: 03/29/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/819,273

Applicant(s)

HAGIWARA ET AL.

Examiner

Vincent E Kovalick

Art Unit

2673

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 January 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,4-8 and 10-12 is/are rejected.
- 7) ☒ Claim(s) 2,3 and 9 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

DETAILED ACTION

Response to Amendment

1. This Office Action is in response to Applicant's Amendment dated January 22, 2004 in response to UDPTO Office Action dated November 5, 2003. The addition of new claims 8-12 have been reviewed and entered in the record; further, Applicant's arguments filed January 22, 2004 relative to claim 1 have been fully considered but they are not persuasive.

Based on the language of claim 1, the references as recited address the limitation of claim 1, e. g. regarding the claim limitation "an operation unit, a support that supports the operation unit so as to be inclinable", Matsuda teaches a joystick pointing device incorporated in a unit, said joystick generates signals corresponding to the inclination state of the said joystick (col. 1, lines 66-67 and col. 2, lines 1-3); relative to claim 1 limitation teaching "a first detection unit that generates a different signal corresponding to an inclination direction of the operation unit, a second detection unit that generates a signal based on a motion when the operation unit is moved in a direction different from the inclination direction"; Matsuda teaches a first detection unit that generates different signals corresponding to an inclination direction of the operation unit (col. 2, lines 28-31); further, Masuda teaches a second detection unit generating a different signal when the joy stick is moved up and down (a direction different from the inclination direction), (col. 1, lines 66-67 and col. 2, lines 1-3); regarding the limitation "a control unit that selects character data from among N data groups based on detected output from first detection unit when the operation unit is inclined and that finalizes data selected based on detected output from the

Art Unit: 2673

second direction unit when the operation unit is operated in the direction different from the inclination direction” Durrani et al. teaches a control unit (joystick) that selects character data from among N data groups based on detected output from the first detection unit when the operation unit is inclined (col. 3, lines 523-55), and Matsuda teaches data selected based on detection output from the second detection unit when the operation unit is operated in the direction different from the inclination direction (col. 1, lines 66-67 and col. 2, lines 1-3) producing an output signal indicative of the push-down and pull-up action.

Relative to Applicant’s argument regarding a lack of motivation, Durrani et al. teaches the need to provide an improved text entry system for entering text on a graphical interface of a small consumer product in which the material can be entered using only one hand of the user, providing the feature of character selection using a joy stick would complement the joystick unit as taught by Matsuda.

Applicant’s remarks regarding claims 2 and 3, have merit and said claims are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Regarding Applicant’s remarks relative to claims 5 and 7, indicating a lack of motivation, Saito teaches a phonetic data-to-Kanji and kana-to-kanji character converter with a syntax analyzer to alter priority order of displayed Kanji homonyms (col. 1, lines 40-46; col. 3, lines 61-68 and col. 4, line 1). Saito further teaches an alphanumeric keyboard for entering phonetic data in the alphabetical form that directly corresponds to kana characters in Japanese (col. 3, lines 61-68 and col. 4, lines 1-18).

Art Unit: 2673

Adapting this feature as taught by Saito to the device as taught by Matsuda taken with Durrani et al. would simplify the alphabetical characters to Kana and Kana to Kanji character conversion process (col. 1, lines 8-19, Saito et al.).

Regarding Applicant's remarks relative to claim 7, indication a lack of motivation relative to the conversion of kana characters to kanji characters, Okumura teaches the merit of automatically conversion of kana characters to kanji characters, the motivation being it speeds up the conversion process (col. 6, lines 54-67, Okumura).

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claim 9 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 9 recites the limitation "each particular angular range" in line 2 of claim 9. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Art Unit: 2673

5. Claims 1, 4, 6 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Matsuda (USP 6,362,810) taken with Durrani et al. (USP 6,011,542).

Relative to claim 1, Matsuda **teaches** a tiltable joystick pointing device (col. 1, lines 66-67; col. 2, lines 1-67; col. 3, lines 1-57 and Fig. 1); Matsuda further **teaches** a character input apparatus comprising, an operation unit, a support that supports the operation unit so as to be inclinable (col. 1, lines 66-67 and col. 2, lines 1-3) a first detection unit (controller) that generates a different signal corresponding to an inclination direction of the operation unit, a second detection unit that generates a signal based on a motion when the operation unit is moved in a direction different from the inclination direction (col. 2, lines 28-41; col. 4, lines 30-42 and Fig. 1).

Matsuda **does not teach** a control unit that selects character data from among N data groups based on detected output from the first detection unit when the operation unit is inclined and that finalizes data selected based on detected output from the second detection unit when the operation unit is operated in the direction different from the inclination direction.

Matsuda teaches a tiltable joystick pointing device that is capable of producing more diverse detector signal contents than was hitherto possible by adding a pull-up and push-down action to the tiltable joystick pointing device.

Durrani et al. **teaches** a graphical text entry wheel for allowing entry of data on a portable hand held consumer device (col. 2, lines 8-52); Durrani et al. further **teaches** a control unit that selects character data from among N data groups based on detected output from the first

Art Unit: 2673

detection unit when the operation unit is inclined and that finalizes data selected based on detected output from the second detection unit when the operation unit is operated in the direction different from the inclination direction (col. 3, lines 53-54; col. 4, lines 1-4 and 9-15; col. 6, lines 1-10; col. 7, lines 48-54; col. 9, lines 10-24; col. 10, lines 28-34 and col. 12, lines 32-34 and 45-46).

It would have been obvious to a person of ordinary skill in the art at the time of the invention to provide to the device as taught by Matsuda the feature as taught by Durrani et al. in order to provide an improved text entry system for entering text on a graphical interface of a small consumer product in which the material can be entered using only one hand of the user (Durrani et al. col. 1, lines 58-61).

Relative to claim 4, Durrani et al. **teaches** the character input apparatus wherein the N data groups include 26 alphabetical characters (col. 3, lines 13-17 and Fig. 1).

Regarding claim 6, Durrani et al. **teaches** said character input apparatus wherein when the control unit selects the data and the selected data is displayed on a display unit, the control unit generates the display data so that not only the data selected based on the inclination direction of the operation unit but also one data positioned adjacent to the selected data is displayed simultaneously on the display unit (col. 3, lines 13-33).

Relative to claim 8, Matsuda **teaches** the character input apparatus wherein the signal generated by the first detection unit corresponds solely to the inclination direction of the operation unit so long as the operation unit has been inclined by a minimum amount from a center position of the operation unit (col. 6, lines 42-60).

6. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Matsuda taken

Art Unit: 2673

with Durrani et al. as applied to claim 4 in item 5 hereinabove, and further in view of Saito et al. (USP 4,777,600).

Regarding claim 5, Matsuda taken with Durrani et al. **does not teach** said character input apparatus wherein a conversion means for converting input data of alphabetical characters to kana characters.

Matsuda taken with Durrani et al. teaches a tiltable joystick pointing device that is capable of producing more diverse detector signal contents than was hitherto possible by adding a pull-up and push-down action to the tiltable joystick pointing device; applying this feature to improving text entry on a graphical screen on a small consumer product.

Saito et al. **teaches** a phonetic data-to-kanji converter (col. 2, lines 53-67 and col. 3, lines 1-43); Saito et al. further **teaches** a conversion means for converting input data of alphabetical characters to kana characters (col. 3, lines 61-67; col. 4, line 1 and Fig. 2).

It would have been obvious to a person of ordinary skill in the art at the time of the invention to provide to the device as taught by Matsuda taken with Durrani et al. the feature as taught by Saito et al. of incorporating conversion means for converting input of alphabetical character to kana characters in order to automate the process of converting text of the English language to a form of Japanese. Saito et al. teaches the input device being a keyboard (col. 3, line 61) adapting the conversion process to the “joystick” means as taught by Masuda taken with Durrani et al. would add the improvement of being able to input data with one hand instead of using a keyboard.

7. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Matsuda taken

with Durrani et al. as applied to claim 4 in item 5 hereinabove, and further in view of Okumura (USP 5,966,719).

Relative to claim 7, Matsuda taken Durrani et al. **does not teach** said character input apparatus wherein a second conversion means for converting the kana characters to kanji characters is provided.

Matsuda taken with Durrani et al. teaches a tiltable joystick pointing device that is capable of producing more diverse detector signal contents than was hitherto possible by adding a pull-up and push-down action to the tiltable joystick pointing device; applying this feature to improving text entry on a graphical screen on a small consumer product.

Okumura **teaches** a method related to the conversion of kana syllabic characters to kanji characters (col. 2, lines 48-67; col. 3, lines 1-67 and col. 4, lines 1-29); Okumura further **teaches** a second conversion means for converting the kana characters to kanji characters (col. 6, lines 54-67).

It would have been obvious to a person of ordinary skill in the art at the time of the invention to provide to the device as taught by Matsuda taken Durrani et al. the feature as taught by Okumura in order to automate the cumbersome task of convert Kana characters to kanji characters.

Okumura teaches the need for an input device for entering document having non-Latin characters (col. 1, lines 6-10); adapting the conversion means as taught by Okumura to use the “joystick” means as taught by Masuda taken with Durrani et al. would add the improvement of being able to input data with one hand instead of using a keyboard.

Art Unit: 2673

8. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Matsuda taken with Durrani et al. as applied to claim 1 in item 5 hereinabove, and further in view of Wergen et al. (USP 6,580,414).

Regarding claim 10, Matsuda taken with Durrani et al. **does not teach** a character input apparatus wherein character data selected corresponds solely to the inclination direction of the operation unit so long as the operation unit has been inclined by a minimum amount from a center position of the operation unit.

Matsuda taken with Durrani et al. teaches a tiltable joystick pointing device that is capable of producing more diverse detector signal contents than was hitherto possible by adding a pull-up and push-down action to the tiltable joystick pointing device; applying this feature to improving text entry on a graphical screen on a small consumer product.

Wergen et al. **teaches** a method for transferring characters especially to a computer and an input device that functions according to this method (col. 2, lines 8-67 and col. 3, lines 1-54);

Wergen et al. further **teaches** a character input apparatus wherein character data selected corresponds solely to the inclination direction of the operation unit so long as the operation unit has been inclined by a minimum amount from a center position of the operation unit (col. 4, lines 3-9; col. 5, lines 39-48; col. 7, lines 43-48 and Abstract).

It would have been obvious to a person of ordinary skill in the art at the time of the invention to provide to the device as taught by Matsuda taken with Durrani et al. the feature as taught by Wergen et al. in order to develop a system that is user friendly particular to handicapped persons (Abstract, Wergen et al.).

Art Unit: 2673

9. Claims 11-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Matsuda taken with Durrani et al. as applied to claim 1 in item 5 hereinabove, and further in view of McAlindon (USP 5,473,325).

Relative to claims 11-12, Matsuda taken with Durrani et al. **does not teach** said character input apparatus wherein the character data is provided on a periphery of the operation unit and corresponds to the character data selected when the operation unit is inclined; and wherein the character data is provided on the entire periphery of the operation unit.

Matsuda taken with Durrani et al. teaches a tiltable joystick pointing device that is capable of producing more diverse detector signal contents than was hitherto possible by adding a pull-up and push-down action to the tiltable joystick pointing device; applying this feature to improving text entry on a graphical screen on a small consumer product.

Matsuda taken with Durrani et al. teaches a tiltable joystick pointing device that is capable of producing more diverse detector signal contents than was hitherto possible by adding a pull-up and push-down action to the tiltable joystick pointing device; applying this feature to improving text entry on a graphical screen on a small consumer product.

McAlindon **teaches** an ergonomic human-computer interface apparatus and method (col. 3, lines 14-67; col. 4, lines 1-67 and col. 4, lines 1-40); McAlindon further **teaches** said character input apparatus wherein the character data is provided on a periphery of the operation unit and corresponds to the character data selected when the operation unit is inclined; and wherein the character data is provided on the entire periphery of the operation unit (col. 10, lines 30-48 and Figs. 2b and 8).

Art Unit: 2673

It would have been obvious to a person of ordinary skill in the art at the time of the invention to provide to the device as taught by Matsuda taken with Durrani et al. the feature as taught by McAlindon in order to provide an ergonomically designed input device that does not contribute to overuse injuries of the wrist and hand (col. 6, lines 1-5, McAlindon).

Allowable Subject Matter

10. Claims 2, 3, 9 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Regarding claim 2, the major difference between the teachings of the prior art of record (Matsuda and Durrani et al.) and that of the instant invention, is that said prior art **does not teach** the said character input apparatus wherein the support is provided with two rotational shafts that are rotated when the operation unit is inclined and two rotation detection means for detecting a rotation magnitude of each rotation shaft, the two rotation detection means constitute the first detection unit, and the detected output is obtained from the second detection unit when the operation unit is moved in a direction perpendicular to the rotational shafts.

Relative to claim 3, the major difference between the teachings of the said prior art of record

Art Unit: 2673

and that of the instant invention is that said prior art **does not teach** the said character input apparatus wherein the control unit selects the data successively based on the output change of the first detection unit when the inclination direction of the operation unit is changed while the inclination of the operation unit that is inclined in a desired direction is being maintained.

Claim 9 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Conclusion

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. .

| | | |
|------------------|-----------|----------------------|
| U. S. Patent No. | 6,482,010 | Maracus et al. |
| U. S. Patent No. | 6,381,027 | Tanaka |
| U. S. Patent No. | 6,323,840 | Steinbrunner |
| U. S. Patent No. | 6,331,849 | VandenBoom |
| U. S. Patent No. | 6,300,937 | Rosenberg |
| U. S. Patent No. | 6,285,356 | Armstrong |
| U. S. Patent No. | 6,175,358 | Scott-Jackson et al. |
| U. S. Patent No. | 6,002,388 | Seffernick et al. |
| U. S. Patent No. | 5,831,596 | Marshall et al. |
| U. S. Patent No. | 5,468,924 | Naitou et al. |

Art Unit: 2673

12. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.


Art Unit: 2673


Responses

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Vincent E Kovalick whose telephone number is 703 306-3020. The examiner can normally be reached on Monday-Thursday 7:30- 4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bipin Shalwala can be reached on 703 305-4938. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703 306-0377.


Vincent E. Kovalick
March 23, 2004


BIPIN SHALWALA
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